

Application No. 10/034,848
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AMENDMENT TO THE ABSTRACT

An installation for densification of porous substrates by CVI comprises an oven, a zone for loading substrates in the oven, means for heating substrates loaded in the loading zone, at least one inlet for admitting reactive gas in the oven, and at least one gas heating zone situated in the oven between the reactive gas inlet and the loading zone. At least one gas preheating device is located outside the oven and is connected to the gas inlet so as to preheat the reactive gas before it enters the oven.

A method for densification of porous substrates by CVI in which substrates are loaded into a loading zone of an oven and heated to a temperature at which a desired matrix material is formed from a precursor gas(es). A reactive gas containing the precursor gas(es) is admitted into one end of the oven and heated upstream from the loading zone of the substrates. The reactive gas is also preheated prior to entering the oven so that, upon entering the oven, it is brought to an intermediate temperature between ambient temperature and the temperature to which the substrates are heated. In this manner, a very small temperature gradient is obtained throughout the loading zone.